REMARKS

Claims 11-36 are pending.

Claims 23-31 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,140,845 to Robbins.

Claims 11-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over "Compilation of Air Pollutant Emission Factors, AP-42" to the Environmental Protection Agency (EPA) in view of U.S. Patent No. 5,140,845 to Robbins, U.S. Patent No. 5,809,664 to Legros *et al.*, and "Chemical Principals" to Masterton *et al.*

Claims 17-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over EPA Method AP-42 in view of Robbins, Legros *et al.*, and Masterton as applied to claims 11-13, and further in view of U.S. Patent 5,522,271 to Turiff *et al.* and/or "Method 5035-Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples" to the EPA.

Claims 20-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Method AP-42 in view of Robbins, Legros *et al.*, and Masterton *et al.* as applied to claims 11-13, and further in view of "Determination of Volatile Organic Solvents in Water by Headspace Sampling with the 8200 CX Autosampler" to Penton.

Claims 32-36 are new. Support for these claims may be found, for example, at page 3, last paragraph through page 4, first paragraph. Applicant submits that no new matter has been added by way of these amendments.

Rejection Under 35 U.S.C. § 102(b)

Claims 23-31 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,140,845 (the '845 patent) to Robbins. Applicant respectfully traverses the rejection and requests withdrawal of same.

To anticipate a claim, the '845 patent must teach every element of the claim and "the identical invention must be shown in as complete detail as contained in the ... claim." *MPEP 2131* citing *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989). The '845 patent does not teach every element of Claims 23-31.

The instant application teaches a kit and method for measuring volatile organic compounds (VOCs) of material produced in a process system having emissions. Claims 23-25 include specific limitations with respect to the different processes where the kits are to be used. Examples of these process systems include spray bed dryers, mixers, fluid bed dryers and coolers, and storage tanks.

Contrary to Examiner's assertion, the '845 patent does not teach a kit comprising a bag and instructions to use the bag in the process as claimed. The '845 patent and the sealable bag do not constitute a kit. The Webster Online Dictionary defines a kit as "a packaged collection of related material". The Examiner provides no evidence that a copy of the '845 patent will be packaged with the sealable bag, or that the sealable bag will even be marked with the corresponding patent number. There is no indication that a skilled person using the sealable bag would be directed to the '845 patent for instruction.

Even if the '845 patent and the sealable bag do constitute a kit as alleged by Examiner, the '845 patent fails to disclose use of the kit in the process as set forth in the plain language of Claims 23-31. This issue was addressed in an appellate opinion of copending application No. 09/806,274 wherein the Board stated that "the preambular language must be given weight as a claim limitation which characterizes the claimed kit with respect to the 'instructions' contained therein as set forth in the body of the claim." *Ex parte* Wayne Edward Beimesch, decision of the Board of Patent Appeals and Interferences, Patent Application No. 09/806,274, Appeal No. 2004-0829, page 7, citing *In re Stencel*, 828 F.2d 751, 4 USPQ2d 1071 (Fed. Cir. 1987). The '845 patent fails to teach or suggest using the sealable bag to sample materials from the claimed processes, which, according to the Board, is a limitation of the rejected claims.

The Examiner has directed Applicant to *In re Ngai,* wherein the CAFC decided that the content of the instructions in a kit claim needed to be functionally related to the kit. Applicant's representative claim language demonstrating the functional relationship of the bag to the instructions is as follows:

> ...(a) an enclosed bag having a sealable opening to allow an amount of said material to be placed in said enclosed bag such that there is headspace above said material; and

(b) instructions for analyzing samples from said headspace in said enclosed bag, thereby providing said volatile organic compounds of said material.

The language in this representative claim functionally relates the kit, the instructions, and the VOC material to be so measured. Applicant maintains that *In re Ngai* is not applicable.

In summary, not every element of Claims 23-31 is taught or suggested by the '845 patent. Withdrawal of rejections of Claims 23-31 under 35 U.S.C. § 102(b) is respectfully requested.

Rejections Under 35 U.S.C. § 103(a)

I. Rejection of Claims 11-16

Claims 11-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over "Compilation of Air Pollutant Emission Factors, AP-42" to the Environmental Protection Agency (EPA) in view of U.S. Patent No. 5,140,845 to Robbins, U.S. Patent No. 5,809,664 to Legros *et al.* and "Chemical Principals" to Masterton *et al.* Applicant respectfully traverses the rejection and requests withdrawal of the same.

The following is a quotation from the MPEP setting forth the three basic criteria that must be met to establish a *prima facie* case of obviousness:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

MPEP §2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

"Compilation of Air Pollutant Emission Factors, AP-42" to the Environmental Protection Agency (EPA) is a general fact sheet for the EPA on techniques used in studying air pollution. This fact sheet does not teach or suggest the method for measuring volatile organic compounds of Applicant's invention as claimed. The

Examiner states, "Method AP-42 reiterates what the applicant already admits is well-known, and that is that certain processes such as spray drying release VOCs into the atmosphere." (Office Action dated Sept 28, 2005 at page 4). Applicant agrees with Examiner in that this reference teaches only what is well known and maintains that it adds nothing to this discussion.

Robbins teaches a method for measuring the volatile constituent of a sample of ground water or soil mixed with water. Robbins does not teach or suggest a method for measuring volatile organic compounds in spray bed dryers, fluid bed dryers, or storage tank systems having emissions as provided by way of Applicant's invention.

Legros *et al.* teach a drying system for a fluid bed dryer. Legros does not teach a method for measuring volatile organic compounds of material produced in a process system having emissions.

"Chemical Principals" to Masterton, Slowinski, and Stanitski is a general chemistry text. This textbook does not teach or suggest the method for measuring volatile organic compounds as claimed by Applicant.

Thus, even though the references are indiscriminantly combined, on the whole, there is no teaching or suggestion of a method for measuring volatile organic compounds (VOCs) of material produced in spray bed dryers, fluid bed dryers, or storage tank systems having emissions as provided by way of Applicant's invention in any of these references. Specifically, Legros and Robbins fail to teach or suggest Applicant's method of measuring volatile organic compounds of a material produced in a process having emissions where, instead, the references relate to soil sampling. The references also constitute non-analogous art with respect to what is claimed because they are not reasonably pertinent to Applicant's field of endeavor where a person designing a method to monitor VOCs released in an industrial process system would not reasonably consult the soil sampling art. Further, Applicant fails to see how the addition of a general chemistry textbook and the generic EPA protocols into the body of this rejection provide any support to the veracity of the Examiner's position in this matter.

In the opinion issued in the appeal of copending application No. 09/806,274, the Board stated:

> "...it is well settled that in order to establish a *prima facie* case of obviousness, the examiner must show that some objective teaching, suggestion or motivation in the applied prior art taken as a whole and/or knowledge generally available to one of ordinary skill in this art would have led that person to the claimed invention as a whole, including each and every limitation of the claim arranged as required by the claim, without recourse to the teachings in [applicant's] disclosure."

Ex parte Wayne Edward Beimesch, decision of the Board of Patent Appeals and Interferences, Patent Application No. 09/806,274, Appeal No. 2004-0829, page 5, citing *In re Rouffet,* 149 F.3d 1350, 1358, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998); *Pro-Mold and Tool Co. v. Great Lakes Plastics Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1629-30 (Fed. Cir. 1996); *In re Fine,* 837 F.2d 1071, 1074-76, 5 USPQ2d 1596, 1598-1600 (Fed. Cir. 1988); *In re Dow Chem. Co.*, 837, F.2d 469, 473, 5 USPQ2d 1529, 1531-32 (Fed. Cir. 1988).

The Examiner presents excerpts from text books and fact sheets from government agencies in an attempt to provide the necessary "objective teaching" referred to above. However, the Examiner merely succeeds in showing that a higher concentration of VOCs will be present in a heated sample than an unheated sample. "...[M]ore molecules will be present in the vapor when equilibrium is reached at higher temperatures thus increasing the probability of detection of the VOC molecules when the headspace is sampled." (Office Action dated Sept 28, 2005 at page 7). Given the explanation of liquid-vapor equilibrium, the Examiner appears to be advocating that one should always utilize as high a temperature as possible to increase gaseous VOC concentration and improve detection. This is not what Applicant teaches *or claims*.

Applicant is not heating samples to promote enhanced VOC detection. Applicant is testing samples under simulated process conditions, e.g., "the mean exit temperature of said emissions of said system". In fact, as disclosed at page 5 of the instant application, "a typical mean exit is from about 5 C to about 100 C." Thus, the mean exit temperature may be well below room temperature. None of the references teach or suggest the testing of samples under simulated process conditions at the mean exit temperature of the emissions. Thus, the basis of rejection is in error by virtue of this heating assumption, and the rejection does not fairly appreciate the problem the Applicant has overcome.

The Examiner appears to take Official Notice that it would be obvious to replicate conditions that exist in a product manufacturing process. We traverse the Examiner's use

of Official Notice and request evidence as permitted by MPEP 2144.03(C). Many laboratories regularly forego the testing of gaseous samples that are heated because such a process may involve an explosion hazard and generally requires time and energy expenditures to reach and/or maintain a specific temperature. It is generally considered more prudent and cost effective to obtain measurements at room temperature, and to extrapolate the results to higher temperatures.

In summary, Applicant fails to see how the cited references taken as a whole disclose or suggest all the claim limitations. Applicant also fails to detect any suggestions or motivations in the references to combine the teachings of the same. A *prima facie* case of obviousness has not been established. Applicant respectfully requests withdrawal of the rejection of Claims 11-16.

II. Rejection of Claims 17-19

Claims 17-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over EPA Method AP-42 in view of Robbins, Legros *et al.*, and Masterton *et al.* as applied to claims 11-13, and further in view of U.S. Patent 5,522,271 to Turiff *et al.*, and/or Method 5035- Closed System Purge and Trap and Extraction for Volatile Organics in Soil and Waste Samples to the EPA. Applicant respectfully traverses the rejection and requests withdrawal of the same.

Applicant's invention is as discussed above.

EPA Method AP-42, Robbins, Legros and Masterton are as discussed above.

Turiff *et al.* teaches a soil sampling tool for measuring VOCs. Turiff *et al.* does not teach or suggest the method of Applicant's invention, wherein volatile organic compounds generated in spray bed dryers, fluid bed dryers, or storage tank systems having emissions are measured.

Method 5035 is a generic text dealing with testing VOCs in solid materials with no specific teaching of many aspects of the presently claimed method.

There is no teaching or suggestion of a method for measuring VOCs in a process system having emissions such as a spray bed dryer or a fluid bed dryer, at the mean exit temperature of said emissions as claimed by Applicant in any of these references. Specifically, Turiff and Robbins fails to teach or suggest Applicant's invention at least for the reasons discussed above. Further, Applicant fails to see how the addition of a general

chemistry textbook and the generic EPA protocols into the body of this rejection provide any support to the veracity of the Examiner's position this matter.

Still further, there is no teaching or suggestion in any of these references to combine the references, nor is there any motivation by one of ordinary skill in the art to combine the same. Thus, Examiner has not carried the burden of establishing a *prima facie* case of obviousness. Applicant respectfully requests withdrawal of the rejection of Claims 17-19.

III. Rejection of Claims 20-22

Claims 20-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Method AP-42 in view of Robbins, Legros *et al.*, and Masterton *et al.* as applied to claims 11-13 above and further in view of "Determination of Volatile Organic Solvents in Water by Headspace Sampling with the 8200 CX Autosampler" to Penton. Applicant respectfully traverses the rejection and requests withdrawal of same.

Applicant's invention is as discussed above.

EPA Method AP-42, Robbins, Legros and Masterton are as discussed above.

Penton teaches a closed system employed in headspace sampling without teaching many aspects of the presently claimed method.

There is no teaching or suggestion of a method for measuring VOCs in a process system having emissions such as a spray bed dryer or a fluid bed dryer, at the mean exit temperature of said emissions as claimed by Applicant in any of these references. Specifically, Penton and Robbins fails to teach or suggest Applicant's invention at least for the reasons discussed above. Further, Applicant fails to see how the addition of a general chemistry textbook and the generic EPA protocols into the body of this rejection provide any support to the veracity of the Examiner's position this matter.

Still further, Examiner fails to point out any teaching or suggestion in any of the cited art to combine the references, nor is there any motivation by one of ordinary skill in the art to combine the same. Thus, Examiner has not established a *prima facie* case of obviousness and withdrawal of the rejection of Claims 20-22 is respectfully requested.

Conclusion

In view of the above Remarks, Applicant has addressed all issues raised in the Office Action dated September 28, 2005. Should the Examiner believe that any issues remain outstanding, the Examiner is requested to call Applicant's attorney, Janelle Strode at (816) 460-5859, in an effort to resolve such issues and advance this application to issuance.

Applicant previously paid for 21 total claims including 6 independent claims. The application currently contains 26 total claims including 9 independent claims. Authorization to charge fees associated with a three month extension of time and 5 excess claims, including 3 independent claims, is submitted herewith. If any additional fee is deemed necessary in connection with this Response, please charge Deposit Account No. 12–0600.

Respectfully submitted,
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